

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* SAFWAT E. TADROS  
and PETER H. TH. VOLLENBERG

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Appeal 2006-3155  
Application 09/682,749  
Technology Center 1700

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Decided: April 30, 2007

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Before EDWARD C. KIMLIN, CHARLES F. WARREN, and  
LINDA M. GAUDETTE, *Administrative Patent Judges*.

GAUDETTE, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the Examiner's final rejection of claims 5, 7, 9, 11-18 and 20-25, the only claims pending in this application. We have jurisdiction over the appeal pursuant to 35 U.S.C. § 6(b).

Appellants' invention relates to a layered composition which includes three defined layers in a defined spatial relationship, namely an upper layer, an intermediate layer and a substrate layer. The upper layer consists essentially of a cycloaliphatic polyester and certain specified types of UV stabilizers. The intermediate layer consists essentially of a cycloaliphatic polyester, and may also include  $\text{TiO}_2$ , or a dye, pigment or special effects additive. Br. 4. According to Appellants, they have discovered that the intermediate layer has a significant affect on the retention of gloss when the material is weathered. Br. 6.

The Examiner relies on the following prior art references to show unpatentability:

Susi	US 4,619,956	Oct. 28, 1986
MacGregor	US 6,136,331	Oct. 24, 2000

The Examiner rejected claims 5, 7, 9, 11-18, and 20-25 under 35 U.S.C § 103(a) as unpatentable over McGregor in view of Susi.<sup>1</sup>

### ISSUES

The Examiner contends that it would have been prima facie obvious to apply more than one layer of the cycloaliphatic polyester composition to MacGregor's layered composition to amplify the weatherability and solvent resistant properties. Appellants contend that the Examiner has failed to show that the prior art teaches or suggests a multilayered composition having upper and intermediate layers consisting essentially of a cycloaliphatic polyester. The issue for us to decide is: Has the Examiner made sufficient factual findings to establish a prima facie case of

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<sup>1</sup> A copy of appealed claims 5, 7, 9, 11-18 and 20-25 may be found in the Claims Appendix of Appellants' Brief.

obviousness, and, if so, does Appellants' comparison testing provide persuasive evidence of unexpected results?

#### FINDINGS OF FACT

- 1) MacGregor discloses a multilayer plastic article comprising a thermoplastic substrate and at least one layer of a cycloaliphatic polyester. Col. 1, ll. 54-58. MacGregor teaches that a layer of the same cycloaliphatic polyester may be laminated or adhered to both sides of the substrate. Col. 1, ll. 38-43.
- 2) MacGregor also discloses a multilayer article comprising a substrate, an intermediate film of the same material as the substrate and a top layer of a cycloaliphatic polyester, such as PCCD. Claim 23; col. 10, ll. 44-48.
- 3) MacGregor's substrate may be a polycarbonate, polyester or blend thereof. Col. 1, ll. 31-37. The polyester used in the substrate may be a cycloaliphatic polyester. Col. 8, ll. 48-50; Claim 8.
- 4) MacGregor discloses that a preferred cycloaliphatic polyester is poly(1,4-cyclohexane-dimethanol-1,4-cyclohexanedicarboxylate) (PCCD), but there is no explicit teaching that this preference is directed to the intermediate layer. Col. 4, ll. 46-59.
- 5) According to MacGregor, suitable cycloaliphatic polyesters are those characterized by optical transparency and improved weatherability compared to the substrate alone. Col. 2, ll. 62-65.
- 6) MacGregor found that "[c]ycloaliphatic polyester resins . . . have better weatherability than polycarbonate alone." Col. 6, ll. 20-21.

- 7) MacGregor discloses the use of ultraviolet light absorbers, including triazine (col. 6, l. 29), to improve the polycarbonate light stability. Col. 6, ll. 21-23
- 8) MacGregor also discloses incorporating a hindered amine light stabilizer (HALS) in a cycloaliphatic polyester layer on the polycarbonate surface to increase weatherability of the structure. Col. 6, ll. 34-36.
- 9) Light stabilizers may be incorporated in PCCD, for example, in an amount of .05 to about 10 weight percent. MacGregor, col. 6, ll. 50-51.
- 10) Susi discloses a method of stabilizing polymer film coatings or molded articles against light by incorporating a synergistic mixture of tris-aryl-s-triazine UV absorber and HALS compound into a polymer binder (Abstract) such as polyester. Col. 4, ll. 48-57.

#### ANALYSIS AND CONCLUSIONS

Appellants argue that the Examiner failed to make a prima facie showing of obviousness because: (1) “MacGregor does not disclose an upper layer that consists essentially of a cycloaliphatic polyester and the UV stabilizers as recited in the claim” and (2) “there is no disclosure of an intermediate layer within the scope of the invention.” Br. 4.

We disagree. The Examiner found that MacGregor’s multilayer structure includes a substrate layer and an upper layer which may be a cycloaliphatic polyester. Answer 3; FF 1. As pointed out by the Examiner, a decorative intermediate layer may be located between the substrate and surface layer (Answer 3) and may be made of same material as the substrate (Answer 4). FF 2. MacGregor explicitly discloses that the substrate may be

a cycloaliphatic polyester. FF 3. Therefore, the Examiner properly concluded that the intermediate layer may be a cycloaliphatic polyester.

Appellants point out that MacGregor indicates a preference for using a blend of cycloaliphatic polyester and polycarbonate in the upper layer. This argument is not persuasive since a reference must be evaluated for all that it fairly teaches and not only for what is indicated as preferred. *See In re Bozek*, 416 F.2d 1385, 1390, 163 USPQ 545, 549 (CCPA 1969). In this case, MacGregor clearly teaches an upper layer which may be a cycloaliphatic polyester *and/or* a polycarbonate, a UV-stabilizer and hindered amine light stabilizer as claimed. Answer 3, 6-7; FF 1, 7, 8.

Appellants assert that the Examiner has not explained the motivation for selecting the various layers to achieve the claimed structure. In our view, the Examiner's rationale for selecting a cycloaliphatic polyester for both the intermediate and upper layers is reasonable and properly based on MacGregor's explicit disclosure of using a cycloaliphatic polyester for the individual layers and the Examiner's determination that such structure would improve weatherability and solvent resistance (Answer 4; FF 6). *See In re Vaeck*, 947 F.2d 488, 493, 20 USPQ2d 1438, 1442 (Fed. Cir. 1991).

Appellants also argue that the Examiner's proposed modification of MacGregor to include a mixture of UV absorber and HALS compound as taught by Susi is based on improper hindsight reasoning. Answer 5-6. Contrary to Appellants, we find that the Examiner has properly identified motivation, in the prior art, for combining the teachings of the references (*see* Answer 5).

Appellants attempt to overcome the Examiner's *prima facie* showing of obviousness through evidence of unexpected results. According to

Appellants, the examples in the Specification and supplemental test results submitted by declaration demonstrate that the compositions of the invention show surprising superiority with respect to surface gloss, and maintain a shiny, un-dulled finish when exposed to weathering conditions compared to compositions in which a PCCD/PC blend is used in the top and/or intermediate layer. Br. 6

We are in agreement with the Examiner that Appellants' evidence fails to demonstrate unexpected results as to those claims which broadly recite a cycloaliphatic polyester because, inter alia, testing is limited to PCCD and, therefore, is not commensurate in scope with the claims. Answer 8. However, we find Appellants' evidence sufficient to establish unexpected results with respect to dependent claims 24 and 25 which are limited to PCCD. We note, in particular, that the Examiner has failed to explain why Appellants' evidence is not considered persuasive with respect to these claims given Appellants' third declaration under 37 C.F.R. § 1.132 stating that all testing was performed using structures having the same layer thicknesses and using the same PCCD material. *See* Answer 9.

Accordingly, the rejection is affirmed as to claims 5, 7, 9, 11-18 and 20-22, and reversed as to claims 24 and 25.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(vi)(effective Sept. 13, 2004).

AFFIRMED-IN-PART

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Application 09/682,749

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